

ABSTRACT OF THE DISCLOSURE

A novel assay for evaluating the efficacy of test compounds in preventing or treating osteoarthritic cartilage damage is provided. Using an *in vitro* articular cartilage graft system, a test compound is administered and its effect on the expression of a number of osteoarthritic marker molecules is measured. Changes in the levels of these molecules after administration of the test compound indicates an effect on osteoarthritic cartilage damage.